

**General Electric Company
Penobscot County
Bangor, Maine
A-404-71-K-R**

**Departmental
Findings of Fact and Order
Air Emission License**

After review of the air emissions license application, staff investigation reports and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 M.R.S.A., Section 344 and Section 590, the Department finds the following facts:

I. REGISTRATION

A. Introduction

General Electric Company (GE) of Bangor, Maine has applied to renew their Air Emission License permitting the operation of emission sources associated with their steam turbine manufacturing facility. Operations at the facility occur at two facilities located off of Griffin Road and Maine Avenue. The Griffin Road facility consists of Building Nos. 10, 15, 20, 30 and 40. The Maine Avenue facility consists of Building Nos. 45, 50, 60, 70 and 75. Due to operational demands and production needs equipment may be moved from one facility to the other in an effort to run efficiently and optimize production.

B. Emission Equipment and Activities

1. Emission Equipment

Fuel Burning Equipment

<u>Equipment</u>	<u>Maximum Capacity (MMBtu/hr)</u>	<u>Max. Firing Rate (gal/hr)</u>	<u>Fuel Type, % sulfur</u>	<u>Stack #</u>	<u>Stack Height (ft)</u>
Boiler #1	3.6	25.7	#2, 0.3%	Bldg. 30 #1	24
Boiler #2	3.6	25.7	#2, 0.3%	Bldg. 30, #2	24
Boiler #3	2.1	15.0	#2, 0.3%	Bldg. 20, #3	20
Boiler #4	5.0	35.7	#2, 0.3%	Bldg. 20, #4	20
Boiler #5	5.0	35.7	#2, 0.3%	Bldg. 10, #5	42
Boiler #6	5.0	35.7	#2, 0.3%	Bldg. 10, #5	42
Boiler #7	3.4	24.3	#2, 0.3%	Bldg. 45, #6	76
Boiler #8	3.4	24.3	#2, 0.3%	Bldg. 45, #6	76
Boiler #9	3.4	24.3	#2, 0.3%	Bldg. 45, #6	76
Stress Relief Furnace #1	9.0	95.8	Propane	Bldg. 45, #453	58
Stress Relief Furnace #2	4.75	50.6	Propane	Bldg. 50, #511	58
Stress Relief Furnace #3	4.74	50.5	Propane	Bldg. 50, #512	42

2. Miscellaneous Activities

GE has several miscellaneous plant-wide activities that use VOC-containing materials such as coolant and various chemicals and products that are not categorically exempt under Chapter 115. GE also operates several parts washers.

3. Insignificant Activities

GE has additional insignificant activities including fuel burning equipment and process equipment that do not need to be listed in the emission equipment table above. This equipment has been included in GE's license application. A list of equipment considered insignificant by size or by category may be found in Appendix B of Chapter 115 of the Department's Regulations.

C. Application Classification

The application for GE does not include the licensing of increased emissions or the installation of new or modified equipment. Therefore, the license is considered to be a renewal of current licensed emission units only.

II. BEST PRACTICAL TREATMENT (BPT)

A. Introduction

In order to receive a license the applicant must control emissions from each unit to a level considered by the Department to represent Best Practical Treatment (BPT), as defined in Chapter 100 of the Department regulations. Separate control requirement categories exist for new and existing equipment as well as for those sources located in designated non-attainment areas. BPT for existing emissions equipment means that method which controls or reduces emissions to the lowest possible level considering:

- the existing state of technology;
- the effectiveness of available alternatives for reducing emissions from the source being considered; and
- the economic feasibility for the type of establishment involved.

B. Boilers #1 - #9

GE operates nine boilers, with capacities between 2.1 and 5.0 MMBtu/hr. The boilers are used to provide heat, hot water and process steam. Due to their small sizes, none of the boilers are subject to New Source Performance Standards (NSPS) Subpart Dc.

A summary of the BPT analysis for Boilers #1 - #9 is the following:

1. Total fuel use for the facility shall not exceed 500,000 gal/year of #2 fuel oil, based on a 12 month rolling total, with a maximum sulfur content not to exceed 0.3% by weight.

2. Chapter 106 regulates fuel sulfur content, however in this case a BPT analysis for SO₂ determined a more stringent limit of 0.3% was appropriate and shall be used.
3. Chapter 103 regulates PM emission limits. The PM₁₀ limits are derived from the PM limits.
4. NO_x emission limits are based on data from similar fired boilers firing #2 fuel.
5. CO and VOC emission limits are based upon AP-42 data dated 9/98.
6. Visible emissions from each of the boilers shall not exceed 20% opacity on a 6-minute block average, except for no more than one 6-minute block average in a 3-hour period.

C. Stress Relief Furnaces #1 - #3

GE operates three stress relief furnaces, rated at 9.0, 4.75 and 4.74 MMBtu/hr, respectively. The stress relief furnaces are used to heat metal, creating flexibility for adjustments as needed.

A summary of the BPT analysis for Stress Relief Furnaces #1 - #3 is the following:

1. Total fuel use for the facility shall not exceed 750,000 gal/year of propane, based on a 12 month rolling total.
2. Chapter 103 regulates PM emission limits. The PM₁₀ limits are derived from the PM limits.
3. SO₂ emission limits are calculated based on the average sulfur content of propane fuel.
4. NO_x, CO and VOC emission limits are based upon AP-42 data dated 10/96.
5. Visible emissions from each of the stress relief furnaces shall not exceed 10% opacity on a 6-minute block average, except for no more than one 6-minute block average in a 3-hour period.

D. Miscellaneous Plant-Wide VOC Emissions

VOC emissions from the facility result from miscellaneous plant-wide use of various VOC compounds mainly for parts cleaning and maintenance. GE keeps records of VOC emissions on a 12-month rolling total using percent VOC data from Material Safety Data Sheets (MSDS) by tracking purchases of VOC containing material and assuming 100% volatilization of used supplies.

BPT for the miscellaneous plant-wide VOC emissions shall be a limit of 8.0 tons/year of VOC from miscellaneous activities, including the parts washers, and continued minimization of VOC emissions wherever possible through pollution prevention activities.

E. Parts Washers

GE operates several parts washers for the cleaning of parts. The parts washer solution consists of VOC containing solvent diluted in water in a ratio of 24:1. The resulting solution contains less than 1.0% VOC. VOC emissions from the parts washers are included in the 8.0 TPY VOC limit for miscellaneous VOC usage.

F. Annual Emissions

GE shall be restricted to the following annual emissions, based on a 12-month rolling total:

Total Licensed Annual Emission for the Facility
Tons/year

(used to calculate the annual license fee)

	PM	PM₁₀	SO₂	NO_x	CO	VOC
Boilers	4.2	4.2	10.6	12.25	1.25	0.05
Stress Relief Furnaces	1.77	1.77	0.53	5.25	0.72	0.19
Misc. VOC usage	--	--	--	--	--	8.0
Total TPY	5.97	5.97	11.13	17.5	1.97	8.24

III.AMBIENT AIR QUALITY ANALYSIS

According to the Maine Regulations Chapter 115, the level of air quality analyses required for a renewal source shall be determined on a case-by case basis. Based on the above total facility emissions, GE is below the emissions level required for modeling and monitoring.

ORDER

Based on the above Findings and subject to conditions listed below, the Department concludes that the emissions from this source:

- will receive Best Practical Treatment,
- will not violate applicable emission standards,
- will not violate applicable ambient air quality standards in conjunction with emissions from other sources.

The Department hereby grants Air Emission License A-404-71-K-R subject to the following conditions:

STANDARD CONDITIONS

- (1) Employees and authorized representatives of the Department shall be allowed access to the licensee's premises during business hours, or any time during which any emissions units are in operation, and at such other times as the Department

- deems necessary for the purpose of performing tests, collecting samples, conducting inspections, or examining and copying records relating to emissions (Title 38 MRSA §347-C).
- (2) The licensee shall acquire a new or amended air emission license prior to commencing construction of a modification, unless specifically provided for in Chapter 115. [MEDEP Chapter 115]
 - (3) Approval to construct shall become invalid if the source has not commenced construction within eighteen (18) months after receipt of such approval or if construction is discontinued for a period of eighteen (18) months or more. The Department may extend this time period upon a satisfactory showing that an extension is justified, but may condition such extension upon a review of either the control technology analysis or the ambient air quality standards analysis, or both. [MEDEP Chapter 115]
 - (4) The licensee shall establish and maintain a continuing program of best management practices for suppression of fugitive particulate matter during any period of construction, reconstruction, or operation which may result in fugitive dust, and shall submit a description of the program to the Department upon request. [MEDEP Chapter 115]
 - (5) The licensee shall pay the annual air emission license fee to the Department, calculated pursuant to Title 38 M.R.S.A. §353. [MEDEP Chapter 115]
 - (6) The license does not convey any property rights of any sort, or any exclusive privilege. [MEDEP Chapter 115]
 - (7) The licensee shall maintain and operate all emission units and air pollution systems required by the air emission license in a manner consistent with good air pollution control practice for minimizing emissions. [MEDEP Chapter 115]
 - (8) The licensee shall maintain sufficient records to accurately document compliance with emission standards and license conditions and shall maintain such records for a minimum of six (6) years. The records shall be submitted to the Department upon written request. [MEDEP Chapter 115]
 - (9) The licensee shall comply with all terms and conditions of the air emission license. The filing of an appeal by the licensee, the notification of planned changes or anticipated noncompliance by the licensee, or the filing of an application by the licensee for a renewal of a license or amendment shall not stay any condition of the license. [MEDEP Chapter 115]

- (10) The licensee may not use as a defense in an enforcement action that the disruption, cessation, or reduction of licensed operations would have been necessary in order to maintain compliance with the conditions of the air emission license. [MEDEP Chapter 115]
- (11) In accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department, the licensee shall:
- A. perform stack testing to demonstrate compliance with the applicable emission standards under circumstances representative of the facility's normal process and operating conditions:
 - 1. within sixty (60) calendar days of receipt of a notification to test from the Department or EPA, if visible emissions, equipment operating parameters, staff inspection, air monitoring or other cause indicate to the Department that equipment may be operating out of compliance with emission standards or license conditions; or
 - 2. pursuant to any other requirement of this license to perform stack testing.
 - B. install or make provisions to install test ports that meet the criteria of 40 CFR Part 60, Appendix A, and test platforms, if necessary, and other accommodations necessary to allow emission testing; and
 - C. submit a written report to the Department within thirty (30) days from date of test completion.
- [MEDEP Chapter 115]
- (12) If the results of a stack test performed under circumstances representative of the facility's normal process and operating conditions indicate emissions in excess of the applicable standards, then:
- A. within thirty (30) days following receipt of such test results, the licensee shall re-test the non-complying emission source under circumstances representative of the facility's normal process and operating conditions and in accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department; and
 - B. the days of violation shall be presumed to include the date of stack test and each and every day of operation thereafter until compliance is demonstrated under normal and representative process and operating conditions, except to the extent that the facility can prove to the satisfaction of the Department that there were intervening days during which no violation occurred or that the violation was not continuing in nature; and
 - C. the licensee may, upon the approval of the Department following the successful demonstration of compliance at alternative load conditions, operate under such alternative load conditions on an interim basis prior to a demonstration of compliance under normal and representative process and operating conditions.
- [MEDEP Chapter 115]

- (13) Notwithstanding any other provisions in the State Implementation Plan approved by the EPA or Section 114(a) of the CAA, any credible evidence may be used for the purpose of establishing whether a person has violated or is in violation of any statute, regulation, or Part 70 license requirement. [MEDEP Chapter 115]
- (14) The licensee shall maintain records of malfunctions, failures, downtime, and any other similar change in operation of air pollution control systems or the emissions unit itself that would affect emission and that is not consistent with the terms and conditions of the air emission license. The licensee shall notify the Department within two (2) days or the next state working day, whichever is later, of such occasions where such changes result in an increase of emissions. The licensee shall report all excess emissions in the units of the applicable emission limitation. [MEDEP Chapter 115]
- (15) Upon written request from the Department, the licensee shall establish and maintain such records, make such reports, install, use and maintain such monitoring equipment, sample such emissions (in accordance with such methods, at such locations, at such intervals, and in such a manner as the Department shall prescribe), and provide other information as the Department may reasonably require to determine the licensee's compliance status. [MEDEP Chapter 115]

SPECIFIC CONDITIONS

(16) **Boilers #1 - #9**

- A. Boilers #1 - #9 shall fire #2 fuel with a maximum sulfur content not to exceed 0.3% by weight. Compliance shall be demonstrated by fuel purchase records and shall be kept on a 12-month rolling total. [MEDEP Chapter 115, BPT]
- B. Total fuel use for Boilers #1 - #9 shall not exceed 500,000 gal/year of #2 fuel oil on a 12-month rolling total basis. Compliance shall be demonstrated through fuel purchase receipts or usage records. [MEDEP Chapter 115, BPT]
- C. Emissions shall not exceed the following [MEDEP Chapter 115, BPT]:

Emission Unit	Units	PM	PM ₁₀	SO ₂	NO _x	CO	VOC
Boiler #1 & #2 (per boiler)	lb/MMBtu	0.12	--	--	--	--	--
	lb/hr	0.44	0.44	1.09	1.1	0.13	0.01
Boiler #3	lb/MMBtu	--	--	--	--	--	--
	lb/hr	0.03	0.03	0.64	0.63	0.08	0.01
Boiler #4, #5 & #6 (per boiler)	lb/MMBtu	0.12	--	--	--	--	--
	lb/hr	0.6	0.6	1.52	1.5	0.2	0.01
Boiler #7, #8 & #9 (per boiler)	lb/MMBtu	0.12	--	--	--	--	--
	lb/hr	0.41	0.41	1.03	1.1	0.13	0.01

- D. Visible emissions from each Boiler #1 - #9 shall not exceed 20% opacity on a 6-minute block average, except for no more than one 6-minute block average in a 3-hour period. [MEDEP Chapter 101]

(17) **Stress Relief Furnaces #1 - #3**

- A. Stress Relief Furnaces #1 - #3 shall fire propane. [MEDEP Chapter 115, BPT]
B. Total fuel use for Stress Relief Furnaces #1 - #3 shall not exceed 750,000 gal/year of propane on a 12-month rolling total basis. Compliance shall be demonstrated through fuel purchase or usage records maintained on a monthly and 12-month rolling total basis. [MEDEP Chapter 115, BPT]
C. Emissions shall not exceed the following [MEDEP Chapter 115, BPT]:

Emission Unit	Units	PM	PM ₁₀	SO ₂	NO _x	CO	VOC
Stress Relief Furnace #1	lb/MMBtu	0.05	--	--	--	--	--
	lb/hr	0.45	0.45	0.14	1.34	0.19	0.05
Stress Relief Furnace #2	lb/MMBtu	0.05	--	--	--	--	--
	lb/hr	0.24	0.24	0.07	0.71	0.10	0.03
Stress Relief Furnace #3	lb/MMBtu	0.05	--	--	--	--	--
	lb/hr	0.24	0.24	0.07	0.71	0.10	0.03

- D. Visible emissions from each Boiler #1 - #3 shall not exceed 10% opacity on a 6-minute block average, except for no more than one 6-minute block average in a 3-hour period. [MEDEP Chapter 101]

(18) **Parts Washers**

Parts washers that use a solvent containing greater than 1% VOC are subject to the operational and record keeping requirements of MEDEP Chapter 130 which include, but are not limited to, the following:

- A. GE shall keep records of the amount of solvent added to each parts washer. [MEDEP Chapter 130]
B. GE shall equip each cold cleaning degreaser with a cover that is easily operated with one hand if [MEDEP Chapter 130]:
1.the solvent vapor pressure is greater than 15 millimeters of mercury measured at 100 °F by ASTM D323-89; or,
2.the solvent is agitated; or,
3.the solvent is heated.
C. GE shall attach a permanent conspicuous label to each unit summarizing the following operational standards [MEDEP Chapter 130]:
1. Close the covers (if required by (1) above) on all solvent degreasing tanks when the tanks are not in use;
2. Drain the cleaned parts for at least fifteen (15) seconds or until dripping stops;
3. If used, supply a solvent spray that is a solid fluid stream (not a fine,

- atomized or shower-type spray) at a pressure that does not exceed ten (10) pounds per square inch gauge pressure (psig);
4. Do not degrease porous or absorbent materials, such as cloth, leather, wood or rope;
 5. Minimize drafts to less than 40 meters/minute; and
 6. Refrain from operating the cold cleaning degreaser upon the occurrence of any visible solvent leak until such leak is repaired.
- D. GE shall not use any halogenated solvents in the degreasing tanks. [MEDEP Chapter 115, BPT]
- E. For those degreasers containing less than 1% VOC, GE shall keep records of the amount of solvent added to each parts washer and shall keep on file the information contained in the Material Safety Data Sheets (MSDS) for each solvent used. [MEDEP Chapter 130]
- (19) GE shall notify the Department within 48 hours and submit a report to the Department on a quarterly basis if a malfunction or breakdown in any component causes a violation of any emission standard (Title 38 MRSA §605).
- (20) **Payment of Annual License Fee**
GE shall pay the annual air emission license fee within 30 days of September 30 of each year. Pursuant to Title 38-353-A, failure to pay this annual fee in the stated timeframe is sufficient grounds for revocation of the license under section 341-D, subsection 3.

DONE AND DATED IN AUGUSTA, MAINE THIS DAY OF 2004.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: _____
DAWN R. GALLAGHER, COMMISSIONER

The term of this license shall be five (5) years from the signature date above.

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: January 28, 2004

Date of application acceptance: January 29, 2004

Date filed with the Board of Environmental Protection: _____

This Order prepared by Rachel E. Pilling, Bureau of Air Quality.